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juveniles seen in the mountains in July, and four of the same noticed along the river July 28.

***Sialia mexicana bairdi*.** Chestnut-backed Bluebird. A few seen in March along the river. Several noticed in the mountains. The location seemed favorable but their scarcity was quite noticeable.

***Sialia arctica*.** Mountain Bluebird. Six seen one day in July among the pinyons. Possibly a family. Their absence from the higher part of the mountains seemed strange.

Sacaton, Arizona.

AN ANNOTATED LIST OF THE BIRDS OF MESA COUNTY, COLORADO

By ROBERT B. ROCKWELL

WITH TWO MAPS AND NINE PHOTOS BY THE AUTHOR

I N undertaking the compilation of an annotated list of the birds of Mesa County, Colorado, it has been the purpose of the writer to collect such information as might be available relating to this subject, with a view to preserving these pioneer observations and thus furnishing a skeleton around which future observers may build a complete Ornithological structure.

In placing this list before the reader, the writer wishes to emphasize the fact that it is purely preliminary; the amount of work he has done in the County, tho comparatively small, forces upon him a full realization of the remarkably small amount of information existing, regarding the bird life of the County, and also of its great possibilities along Ornithological lines on account of its geographical position and varying topography.

The information contained herein has been secured by an extensive correspondence covering a period of about fifteen months during which time every probable source of information on the subject which has come to the writer's knowledge has been investigated and the information thus secured embodied in this list. Added to this information are the observations of the writer covering two entire years and portions of the six intervening years between 1897 and 1905, about one-half of which time was spent within the confines of the County and during which time 109 species were encountered and a close study made of the commoner varieties.

In response to requests for information the writer has received generous and efficient assistance from the following persons and he wishes to take this opportunity to express to them his gratitude and appreciation of the valuable notes so willingly furnished.

To Prof. W. W. Cooke, U. S. Biological Survey, Washington, D. C., to whom the writer is indebted for a working model (Cooke's *Birds of Colorado* being followed as closely as possible both as to contents and to form), the entire list as completed was sent for correction and criticism. Prof. Cooke, after carefully examining the manuscript of the list, added nine new species and important notes on several already included in the list.

Mr. Richard H. Sullivan, Local Forecaster, U. S. Weather Bureau, Wichita, Kansas, formerly of Grand Junction, Colorado: An annotated list of 93 species, observed in that vicinity during about three year's residence, and containing among much other valuable information a very complete record of dates of arrival and de-

parture of species at Grand Junction, which have been used in this list in practically their entirety.

Miss Myra Eggleston, Ouray, Colorado, formerly of Grand Junction: An annotated list of 47 species observed by her in that vicinity, and complete notes on 19 species, that have been copied verbatim in the absence of any other information on those particular species.

Mr. Floyd Smalley, Collbran: Notes on 10 species observed by him in Plateau Valley, which had not been encountered by the writer.

Dr. M. V. Watson, Plateau City: Migration notes on 6 species of ducks observed by him in Plateau Valley.

Mr. E. R. Warren, Colorado Springs: An annotated list of 22 species observed in the vicinity of Grand Junction.

Mr. P. McCaffrey, DeBeque: Migration and nesting notes on the ducks at DeBeque.

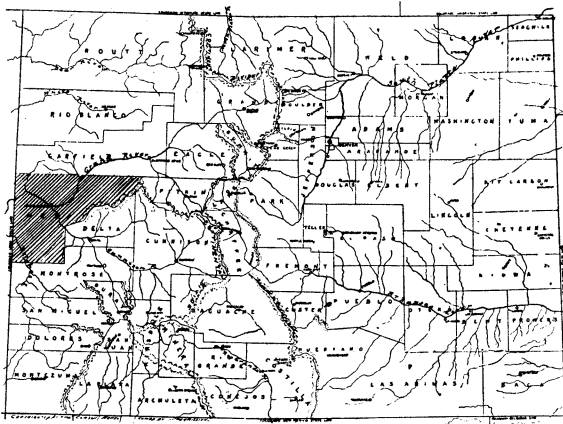
State Historical and Natural History Society, Denver: Notes on 3 species collected by Messrs. Will C. Ferrill and H. G. Smith at Grand Junction.

Without the above information much of the relative completeness of this list would be lacking, as nearly all of it covered information not contained in the writer's notes.

Notwithstanding the information collected from various parts of the County there yet remains a large number of species whose established range undoubtedly includes Mesa County, and whose absence from this list can only be accounted for by the small amount of information available regarding Mesa County Ornithology.

Beside the many species which without doubt occur regularly in the County there are also a number of western species whose extreme eastern limit may extend to western Colorado, and if this is the case, the valley of the Grand River forms a natural highway into Mesa County from the west which is probably the route traveled by these western species.

Prof. Cooke in his *Birds of Colorado* says, "The whole of north-western Colorado remains unexplored. What a field for the Ornithologist! As large as the whole of New England outside of Maine, and containing the whole valley of the Grand River and its tributaries, it will reward the zealous seeker with many Pacific forms not now known to Colorado. No other part of the State will probably show so large a return as the region around Grand Junction." It is unfortunate that this list does not bear out



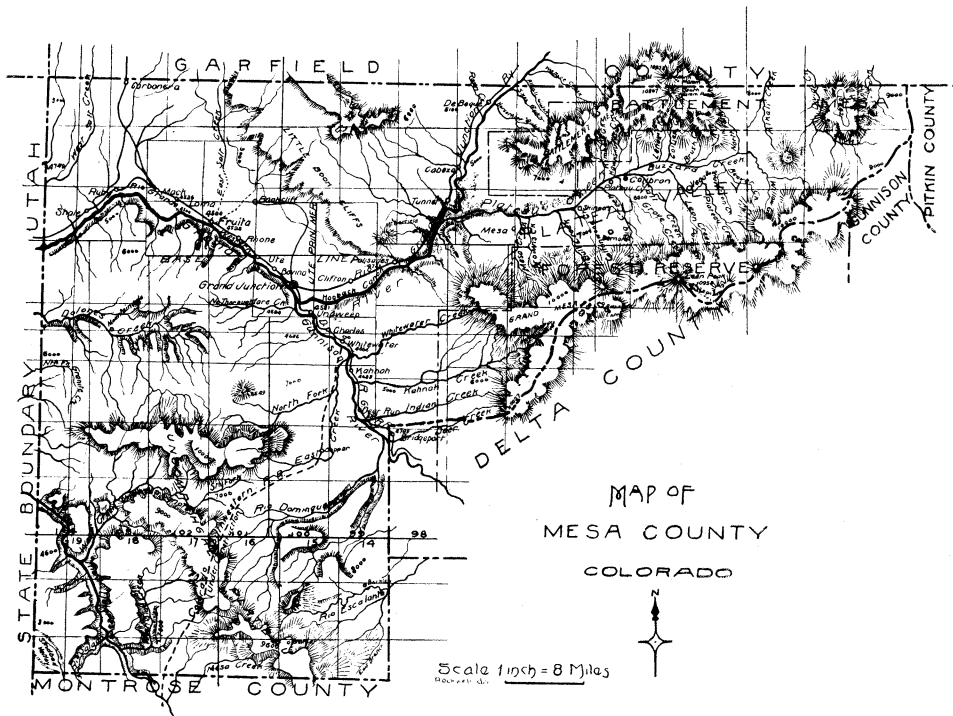
MAP OF COLORADO SHOWING POSITION OF MESA COUNTY

Prof. Cooke's last statement more fully, as only a few rare western forms are included in it (and nearly all of these were furnished by Prof. Cooke), but the fact that it does not bear him out in no way detracts from the force of his statement, as most of the observations from that section are of a very general nature and practically no close study or collecting has been done in that locality, and it is perfectly safe to predict that careful study of this section will be productive of many rare and unique discoveries.

TOPOGRAPHY OF MESA COUNTY

Mesa County is situated on the extreme western edge of Colorado, adjoining Utah, and about midway between the northern and southern boundaries of the State. It has an area of about 3300 square miles, or as large as Delaware and Rhode Island combined.

The altitude of the County varies greatly. Probably the lowest point in the County is the Grand River where it crosses the state line at 4358 feet above sea level, while the highest points are Leon Peak, 10,954 feet on the southeastern boundary and South Mamm Peak 10,897 feet on the northern boundary, thus establishing a vertical range of something over 6,500 feet. The greater portion of the County is composed largely of broad, flat plateaus ranging in altitude from 5,000 to 7,000 feet, and high rolling mesas from 8,000 to 10,000 feet, altho at several points barren and extremely rugged mountains are encountered.

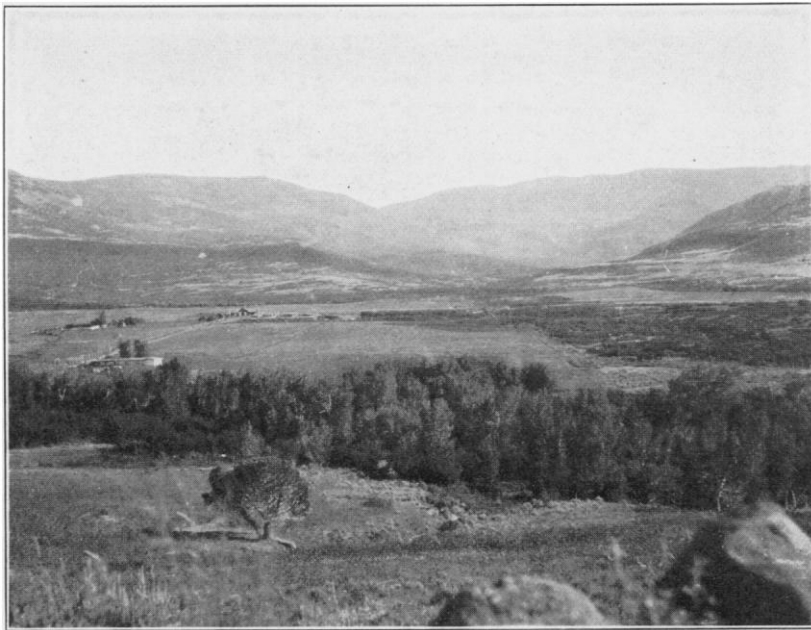


Three large rivers drain the County: the Grand which flows southwesterly thru the northern part of the County, the Gunnison which flows northwesterly and joins the Grand at Grand Junction, near the center of the County, and the Dolores which, flowing northwesterly toward the Grand River in Utah, cuts a small triangle from the southwest corner of the County. These streams, while all having their sources outside of the County, are considerably augmented by a few principal tributaries, chief among which is Plateau Creek which drains the eastern portion of the County and which is fed by 21 smaller streams. Thruout the western part of the County where there is very little timber to conserve the snow-fall, many of the tributaries are roaring torrents in the spring, but dry up entirely during the summer.

The western and southern portion of the County, which is by far the larger

territory, is largely a rough, broken, arid country consisting of sandstone ledges and canyons, cedar and pinyon covered hills, adobe buttes, and sage-brush and greasewood covered flats, and thru this greater part of the County practically no ornithological work has been done. This general type of topography is prevalent thruout the County, with the exception of the narrow eastern part, and the valleys of the Grand, Gunnison and Dolores Rivers.

The eastern end of the County is a remarkably well-watered and timbered section, and includes a portion of the Grand Mesa which in many places attains an altitude of 10,500 feet. This mesa is rolling and smooth in outline and is covered with a luxuriant growth of spruce, pine and balsam of several varieties, quaking-aspen, scrub-oak and service berry, interspersed with a great variety of shrubs, flowering plants and grasses. Along the numerous creeks which drain this section mountain birch, cottonwood and willows grow in profusion. There is probably no



BALLANTINE AND ROCKWELL RANCH, HEAD OF PLATEAU VALLEY, MESA COUNTY,
WHERE MUCH OF THE INFORMATION IN THIS LIST WAS COMPILED

place in the Rocky Mountains which affords such a variety of food and cover, and to this fact, coupled with a remarkable abundance of insect life, may be attributed the abundance and variety of bird life occurring there.

The cultivated areas of the County are closely confined to the courses of the streams, with the exception of Plateau Valley where the smaller streams flowing into Plateau Creek at right angles, afford abundant water supply for a territory ranging in width from 10 to 20 miles and about 35 miles long. Nearly all of this land that is irrigable is under cultivation, and a vast amount of hay and grain is produced, while along the Grand and Gunnison river is located one of the greatest fruit raising districts in the west.

Practically all of the observations contained in this list come from the eastern, northern and central portions of the County thus practically ignoring the great

tract lying south of the Grand River and west of the Gunnison, and as the Dolores forms a natural highway for southern forms to wander into the County, it is not unreasonable to suppose that a number of species occur with more or less regularity in the southern end of the County, which have not yet been observed or recorded.

Partly on this account and partly on account of the unavoidable incompleteness of this list, the writer has included in the body of the list, but in brackets and smaller type, those species whose established range undoubtedly includes Mesa County, and whose seasonal movements make their occurrence within the county boundaries a practical certainty at some time of the year. The authority for including these hypothetical species in the list is derived from the ranges given in Prof. W. W. Cooke's *Birds of Colorado*, and the list of these species has been further passed upon by him, with particular reference to Mesa County. This feature of the list has been included simply as a guide in field work and as an aid



LEON PEAK, THE HIGHEST POINT IN MESA COUNTY, 10,954 FEET ALTITUDE

to intelligent efforts in clearing up the many points of uncertainty regarding Mesa County Ornithology.

The entire list as it stands includes 203 species, 159 of which have been definitely recorded for Mesa County, while the remaining 44 species altho not having been found within the County boundaries up to the present time, will probably be reported from there in the future.

ANNOTATED LIST

[***Aechmophorus occidentalis***. Western Grebe. This western species is an abundant summer resident in Utah and has been seen in South Park by Carter, so probably occurs regularly in Mesa County during migration, tho never in any abundance.]

Columbus nigricollis californicus. American Eared Grebe. Summer resident, not common. This species is undoubtedly a regular migrant, but the writer has only seen it once. Mr. Floyd Smalley reports it as a regular summer resident at a small reservoir in Plateau Valley at about 6500.

[**Gavia immer.** Loon. A bird of general distribution thruout the State. Probably a regular tho uncommon migrant.]

Larus delawarensis. Ring-billed Gull. Migrant. This bird is probably one of the species that occur with more or less regularity during migration, but are never common. Miss Eggleston reports it as a rare migrant and Mr. Sullivan has seen it several times during July and August of 1903 and 1904 at Grand Junction. The writer has never seen it in the higher portions of the County and can learn of no records of it except along the Grand River.

[**Hydrochelidon nigra surinamensis.** Black Tern. Occasionally met with thruout the State in suitable localities, and undoubtedly occurs in more or less abundance during migration. A very few may possibly summer in Mesa County as they do in Routt County.]

Pelecanus erythrorhynchos. American White Pelican. Migrant. Whatever has been said regarding the occurrence of the Ring-billed Gull will apply equally well to this species. The only record however for the County is of a flock of eight seen by Mr. Sullivan, September 4, 1904 at Grand Junction.

[**Mergus americanus.** American Merganser. A bird of wide distribution, individuals of which undoubtedly find their way into the County from time to time during migration.]

[**Mergus serrator.** Red-breasted Merganser. Prof. Cooke says, "Undoubtedly occurs, tho not yet reported on the lower waters of western Colorado." Carter found them breeding on the Blue River not more than 75 miles northeast of Mesa County.]

[**Lophodytes cucullatus.** Hooded Merganser. Whatever has been said regarding the American Merganser will apply equally well to this species.]

Anas boschas. Mallard. Common in migration; breeds sparingly. This is probably the commonest duck occurring in the County. Owing to lack of suitable localities it is not a common breeder; but the writer has found young birds regularly on the head of Beaver Creek at about 9,000 feet.

Mr. P. McCaffrey mentions it as a regular breeder along the Grand River and Dr. W. V. Watson reports that they breed rarely in the Plateau Valley at about 6,000 feet, and a few remain all winter in the warm springs below Plateau City. In speaking of the migration of Mallard, Cinnamon Teal and Pintail he says: "The flight begins in spring early in March and continues 3 to 5 weeks. The autumnal flight begins in September (about the 20th) and lasts until November 1st."

Mr. R. H. Sullivan has seen them migrating as early as February 3, 1904, and as late as November 4, 1904, at Grand Junction. He says, "I would say that the main spring migration is in full swing between March 5 and 20, and the fall flight between October 15 and November 1.

Chaulelasmus streperus. Gadwall. Migrant. Mr. Sullivan says of this bird: "I saw a flock of 11 rise from the Gunnison River, March 28, 1904. The only time I have seen this duck." This would seem to indicate that the Gadwall is not a common migrant.

Mareca americana. Baldpate. Migrant. Mr. Sullivan reports them as more or less plentiful during the fall migration and he has also seen them occasionally during the spring at Grand Junction.

Nettion carolinensis. Green-winged Teal. Common in migration. Probably next in abundance to the Mallard during the fall and spring migrations, but have found no evidence of its breeding, altho Carter found it nesting in Middle Park. Mr. Sullivan has seen them both in spring and fall migration and classes them as "migrant, rather common in small flocks." It is also mentioned as a migrant at Grand Junction by Miss Eggleston.

Querquedula discors. Blue-winged Teal. Migrant. Miss Eggleston reports it as "Migrant: found in the marshes with the Green-winged Teal each spring and fall." Mr. Floyd Smalley gives it as occurring regularly in migration on the Grand Mesa.

Querquedula cyanoptera. Cinnamon Teal. Migrant. Altho this should be one of the commonest ducks of the County the writer has only two records, both from the Plateau Valley. Mr. Smalley reports seeing them several times on a small reservoir at the head of the Valley at about 6,500 feet and Dr. Watson says they occur regularly along Plateau Creek at about 6,000.

Spatula clypeata. Shoveller. Migrant. Both Mr. Smalley and Dr. Watson report this bird from Plateau Valley but I have no records of it occurring in the lower portions of the County altho it undoubtedly is not uncommon there during spring and fall.

Dafila acuta. Pintail. Migrant. Mr. Sullivan classes the Pintail as a rather common migrant. He says, "I have seen flocks of Pintails as early as February 27 (1904). On March 6, 1903, after the great cold spell of January and February I saw four flocks averaging 20 to 30 birds each. Have seen them returning November 4 (1904). Saw several flocks on October 18, 1904." Dr. Watson reports it as a regular migrant in Plateau Valley from 6,000 to 6,500 feet.

Marila americana. Redhead. Migrant. Mr. Sullivan has seen them both in spring and fall migration: in the fall from September 28 to October 22, and in the spring on February 27 and March 6. Mr. Smalley reports a good many taken on the lakes on the Grand Mesa during the fall and Dr. W. V. Watson gives it as a regular migrant in Plateau Valley.

Marila vallisneria. Canvasback. Migrant. Mr. Sullivan reports a flock of about 60 birds seen on the Grand River near Grand Junction February 20, 1904, and Mr. Smalley says they are occasionally taken on the lakes on the Grand Mesa. They probably occur regularly in migration tho not in any abundance.

[**Marila marila.** American Scaup Duck. Prof. Cooke says, "Occurs on both sides of the range but never common anywhere."]

[**Marila affinis.** Lesser Scaup Duck. Probably occurs regularly tho rather rarely during migration.]

[**Clangula islandica.** Barrow Golden-eye. Carter found this duck breeding at Breckenridge where it was a summer resident. Probably occurs regularly but rarely in Mesa County during the summer, and more commonly during migration.]

[**Charitonetta albeola.** Buffle-head. Occurs thruout the State in migration. Probably occurs in some abundance during certain periods of the spring migration.]

[**Histrionicus histrionicus.** Harlequin Duck. Cooke records this bird as a breeder in western Colorado at the higher altitudes. Probably occurs rarely both as a breeder and during migration.]

[**Erismatura jamaicensis.** Ruddy Duck. The Ruddy undoubtedly occurs during migration as commonly as the other species of ducks and its absence from this list can only be accounted for by the small amount of information available. It is not improbable to expect that it will yet be found breeding within the County.]

Chen hyperborea. Lesser Snow Goose. Migrant. Mr. Sullivan reports two flocks of migrants at Grand Junction, one March 4, 1904, and one October 20, 1904. They probably occur more or less regularly in migration.

Branta canadensis. Canada Goose. Migrant. Mr. Sullivan reports seeing two large flocks pass over Grand Junction March 18, 1904, but has never seen them in the fall. Mr. Peter Lefever and Mr. John Fitzpatrick have both seen it occasionally in migration in Plateau Valley, but have not noted it in late years.

[**Branta canadensis hutchinsii.** Hutchins Goose. This species tho undoubtedly occurring regularly within the County is in all probability confused with the typical form by hunters. It is probably somewhat rarer than the Canada Goose.]

Botaurus lentiginosus. American Bittern. Mr. Sullivan classes this bird as scarce and says, "I saw two pairs along the slough south of Grand Junction during the summers of 1903 and 1904. Do not know that they breed."

Ardea herodias. Great Blue Heron. Summer resident; not uncommon, in mi-

gration common. The writer has seen it frequently in spring and fall thruout the County up to 9,000 feet, but has not found it breeding. Mr. Sullivan speaks of it as occurring along the Gunnison River and thinks they breed there. Mr. E. R. Warren and Miss Eggleston report it as a common summer resident at Grand Junction.

Nycticorax nycticorax naevius. Black-crowned Night Heron. Mr. R. H. Sullivan says, "I saw a single individual in the slough south of the Sugar Factory (Grand Junction) at 8 p. m. August 22, 1904. The only one I have seen here." This is the only definite record for this species but it is not unreasonable to suppose that it occurs with more or less regularity during migration.

Grus mexicana. Sandhill Crane. Summer resident, not uncommon locally. Several pairs of these birds have nested regularly in the high mountain parks at the head of the Muddy, and they are reported frequently from various points on the Grand Mesa. The usual altitude selected for their breeding grounds is from 9,000 to 9,500.

[**Rallus virginianus.** Virginia Rail. **Porzana carolina.** Sora. These two species, while of very wide distribution, are usually found in low altitudes. Probably both species occur in the Grand Valley during migration, and a few may summer there.]

Fulica americana. American Coot. One was killed during the summer of 1904 by Mr. Floyd Smalley on a small reservoir in Plateau Valley at about 6500 feet. It is probably an occasional summer resident in suitable localities, and a regular migrant, but information regarding its abundance is lacking.

[**Phalaropus lobatus.** Northern Phalarope. **Steganopus tricolor.** Wilson Phalarope. Both of the above species undoubtedly occur regularly as migrants.]

[**Recurvirostra americana.** American Avocet. Occurs commonly in the San Luis Valley and abundantly in Utah so it is reasonable to suppose that it is of regular occurrence, in Mesa County during migration, tho probably never common.]

Himantopus mexicanus. Black-necked Stilt. Miss Eggleston classes this bird as "irregular migrant" and says, "For a few days during the season of migration this bird may be seen wading in the shallow water of the Rio Colorado in company with the sandpipers. They are more often seen early in the evening when the insects are numerous over the water. They are rarely seen in flocks, often only one being noted in a season."

Gallinago delicata. Wilson Snipe. Information is lacking on this bird. The writer has taken it four times, once in February, 1902, and three times during the winter of 1904-5 in Plateau Valley at an altitude of 6500. There is comparatively little suitable ground for it in the County and I think its occurrence must be classed as migrant, rather uncommon.

Actodromas maculata. Pectoral Sandpiper. Miss Eggleston classes them as "irregular migrants" and says they are occasionally seen with the other sandpipers for a few days during high water, wading along the edges of the Rio Colorado.

Actodromas bairdii. Baird Sandpiper. Miss Eggleston writes, "Regular migrant, being seen both in the spring and fall. They come in small numbers, remaining a few days, apparently feeding upon the helgramites."

Actodromas minutilla. Least Sandpiper. Regular migrant. Speaking of this bird Miss Eggleston says, "This is the commonest of the sandpipers in the lower valley. They are seen in small flocks for a few days each spring and fall. They remain longer than the other wading birds except the heron."

Totanus melanoleucus. Greater Yellow-legs. **Totanus flavipes.** Lesser Yellow-legs. Not uncommon in migration in suitable localities. The writer has seen both species on the reservoirs on the Grand Mesa up to 10,000 feet, and also in

Plateau Valley at 6500 feet. The two species occur in about equal abundance wherever found.

Helodromas solitarius cinnamomeus. Solitary Sandpiper. The only information at hand regarding this species is from Prof. Cooke who says: "Several seen June 22, 1893, by J. A. Loring on the Grand River near Grand Junction." They probably occur regularly in migration.

[**Symphemia semipalmata inornata.** Western Willet. Undoubtedly a regular migrant and probably a few summer within the boundaries of the County.]

Bartramia longicauda. Bartramian Sandpiper. Accidental. A lone bird of this species was seen by the writer on a small dry sage-brush flat at the head of Plateau Valley on the slope of the Grand Mesa at about 6800 feet. The bird which was quite tame, was flushed repeatedly and there can be no doubt as to the identity. The surrounding altitude and locality make this the strangest record the writer has ever encountered.

Actitis macularia. Spotted Sandpiper. Summer resident, common. This sandpiper, which is the most common wader with the possible exception of the Killdeer, is found on all the reservoirs and along all the streams thruout the spring, summer and fall. It is apparently as common at 10,000 feet as at 5000 during the breeding season and is much more common during migration thruout the County. Mr. Sullivan gives the extremes of migration dates as March 18 and October 7.

Numenius longirostris. Long-billed Curlew. Mr. Floyd Smalley reports killing one of these birds on a small reservoir at the head of Plateau Valley at an altitude of about 6500, during the spring of 1905. This is the only information I have regarding the occurrence of this bird in the County. It is probably a regular migrant, tho never occurring in any abundance.

Oxyechus vociferus. Killdeer. Summer resident, abundant. The commonest wader found in the County. Arrives about April 1, or possibly a little earlier in the lower parts of the County, breeds early in June and stays until late in October. Nests commonly up to at least 6500. My earliest arrival date is March 20, 1902.

[**Podasocys montanus.** Mountain Plover. Cooke mentions this species as occurring in the mountain parks during the summer, and Carter found it nesting in Middle Park. Probably occurs rarely in Mesa County in the summer and more commonly during migration.]

Colinus virginianus. Bob-white. The only information I have relative to the occurrence of this bird I quote from Cooke's *Birds of Colorado*, Second Appendix, (March, 1898): "Introduced about 1891 near Grand Junction and still occurs, but not in anywhere near the numbers of the California Partridge."

Lophortyx californicus. California Partridge. Resident. Abundant locally. Speaking of this species Miss Eggleston says, "A few years ago these birds were introduced near Grand Junction and have multiplied rapidly. They make their nests under the piles of pruned branches from the orchards and bring out large broods. One hen has been seen with twenty-three chicks, of two distinct broods. They are very tame, sitting on the fence posts or trees by the roadside and calling noisily to one another. They feed early in the morning and large numbers of them can be driven from the gardens."

Mr. Sullivan says of them: "Plentiful; so plentiful as to become a nuisance; farmers are complaining. They do not fly in flocks like the Bob-white, but will scatter thru the brush in all directions as soon as flushed. It is seldom that more than two or three fly away together. They seem to be at home in the trees, too." They are common at least as far up the Grand River as DeBeque.

Dendragapus obscurus. Dusky Grouse. Resident. Common in suitable localities. Breeds from 7,000 to 10,000 feet, during June. The young are usually on the wing in August. During September and October these birds are in flocks, but the rest of the year they are found mostly in pairs or singly. They show very little fear and are an easy prey to marksmen. Their favorite haunts are open quaking asp hillsides or the small glades or parks in the heavy spruce timber.

[**Podiœcetes phasianellus campestris.** Prairie Sharp-tailed Grouse. This bird was formerly not uncommon thruout northwestern Colorado and is still found in considerable numbers in certain parts of Routt County, being strictly resident wherever found. It is not improbable that a few scattered flocks may be found in the Grand Mesa section of Mesa County.]

Centrocercus urophasianus. Sage Grouse. Resident. Not uncommon. Lack of extensive sage brush country accounts for the apparent scarcity of this bird. I have seen it in March, 10 miles south of DeBeque, in summer in Plateau Valley and in July with young at the foot of Mamm's Peak. It usually breeds in May at from 5,000 to 8,000 feet and the only migration if any is a slight vertical one. Miss Eggleston mentions it as a summer resident around Grand Junction.

[**Columba fasciata.** Band-tailed Pigeon. Prof. Cooke states that this bird is quite common and nests near Glenwood Springs. The writer has never seen the bird in this section and it is probably of uncommon occurrence in Mesa County.]

Zenaidura macroura. Mourning Dove. Summer resident, abundant. One of the commonest summer birds, nesting abundantly up to at least 7,000 feet. At this altitude it arrives the latter part of April, nests in May, June, and July and the bulk leave early in September. Mr. Sullivan has seen it as early as February 26 (1905) and as late as November 2, at Grand Junction. He says "Nesting begins during the latter part of March and continues with little regularity until the late summer. Mr. S. M. Bradbury says a dove was seen on a nest with eggs September 1, 1903. They are very plentiful in large flocks between the middle of August and the middle of September." Mr. E. R. Warren reports it from Grand Junction October 4. Raises at least two broods a season and occasionally three.

Cathartes aura. Turkey Vulture. Summer resident, common. I know of no place in the State where the Turkey Vulture or Buzzard as it is commonly known is more abundant than in Mesa County. On Plateau Creek about 4 miles above Collbran there is a "Buzzard Roost" in a grove of large trees, where I have seen as high as 50 of these birds at one time as night approached. The birds undoubtedly breed but I have never found nest or young. My earliest arrival date is April 3, 1902, and the bulk are here by April 15. I have seen the birds as high as 10,000 feet but do not think they breed that high. Mr. Sullivan says the birds are never very plentiful in the lower valley. His extreme dates of migrations are March 18 and September 27.

Circus hudsonius. Marsh Hawk. Summer resident, not uncommon. I have every reason to believe that this hawk breeds within the County, as I have seen it from April to November at frequent intervals, but have never found it nesting. Mr. E. R. Warren reports it from Grand Junction about October 1st, and it may occur in the County in winter but I have no records to that effect.

Accipiter velox. Sharp-shinned Hawk. Summer resident, common and breeds. This species is fully as common here as in other portions of the State and altho I have only one record of its nesting in the County, I think it may be considered as a common breeder. The nest in question was found early in June, 1897. It was built in a cedar and contained three fresh eggs. This set is now in the possession of Prof. A. H. Felger. I have never seen this bird in the winter altho it is probably a not uncommon winter resident. Miss Eggleston and Mr. Sullivan both mention it as a common migrant at Grand Junction.

Accipiter cooperi. Cooper Hawk. Abundance doubtful. My only record of this bird is of one seen March 20, 1902, three miles south of Collbran, but judging from notes from adjoining sections I am inclined to think it is not of uncommon occurrence. I have frequently seen a hawk at a distance which I took to be this species, but the above is the only definite record.

[**Accipiter atricapillus.** American Goshawk. Generally distributed thruout the State during winter and not uncommon in the mountains during the summer. Probably occurs in the County at all times of the year but never commonly.]

Buteo borealis calurus. Western Red-tail. Summer resident, common; winter resident, not common. By far the most abundant big hawk in the summer, arriving late in March and breeding early in May. Breeds commonly from 6,000 to 9,000 feet and in the Buzzard Creek country (8,000 to 9,000) builds in scrub oaks from 8 to 15 feet above the ground, and also in the sandstone ledges. In the valleys it nests commonly along the creeks, selecting tall cottonwoods or spruces and building at from 30 to 60 feet above ground. Incubated eggs have been taken as early as May 7th at 8,000 feet. I have included it as a winter resident upon the strength of having seen it February 8 and March 12, 1902, sometime before the bird movement starts. Mr. Sullivan has seen it only as a migrant at Grand Junction.

Buteo swainsoni. Swainson Hawk. Summer resident, common. With the exception of the Western Red-tail this is the commonest big hawk found in the County. It arrives with the Red-tail and breeds early in May. Probably a very few remain thruout the winter in the lower parts of the County. Mr. Sullivan states that this is probably the commonest of the larger hawks and buzzards around Grand Junction and they probably breed, but he has never seen them during December and January.

[**Archibuteo ferrugineus.** Ferruginous Rough-leg. Probably a rather common resident, omitted from the list thru being confused with the other large hawks in the absence of specimens in the hand.]

Aquila chrysaetos. Golden Eagle. Resident, common. The rocky portion of the County furnishes ideal homes for this great bird and they occur in all suitable localities. They are much more in evidence during the winter than in summer, owing to the fact that they nest very early (March and April) and then wander up to high altitudes for the summer, returning to the valleys when the food supply on the Mesa is cut off by snow. During the winter they live largely on carrion, but so far as my observations go are not depredatory. I have not found them nesting but have seen the birds almost every day during March and April. Mr. Sullivan reports two pairs nesting near Grand Junction in 1903 and 1904, one pair on the cliffs of the Grand Mesa and one on the cliffs of Pinon Mesa about 10 miles south of the city.

Haliaeetus leucocephalus. Bald Eagle. Mr. Sullivan considers the Bald Eagle more or less common on the Grand River. He says: "In the summer of 1904, I saw more Bald Eagles than Golden. On July 11, 1904, I counted 9 soaring about 300 to 500 feet up, just east of the city. Returning home from the east during February, 1904, I counted 7 Bald Eagles along the Grand River either in the cottonwoods or flying along about 75 feet up, below DeBeque. It was not at all uncommon for us to see two or three of these birds going northward almost daily between March and August, 1904. I cannot say that they breed in the circumscribed area to which my observations were mostly confined, but at any rate I never saw so many eagles in the locality (both kinds) as I saw during the summer of 1904, and reports from the higher elevations should show that both kinds breed." Mr. Floyd Smalley reports two birds of this species from the head of Plateau Valley at about 6,500 feet. One was a summer record and the other a fall record.

[**Falco mexicanus.** Prairie Falcon. Cooke says, "In some of the more open portions of western Colorado it is quite numerous." Carter found it breeding in Middle Park. Probably is a not uncommon resident locally.]

[**Falco peregrinus anatum.** Duck Hawk. Cooke reports it as breeding up to 10,000 feet, and it has been found breeding in different parts of western Colorado. Probably occurs regularly as a resident but never commonly.]

Falco columbarius. Pigeon Hawk. The only record of this species at hand is one seen by the writer December 23, 1901, on Plateau Creek at about 6,000 feet. It probably occurs regularly but rather rarely.

[**Falco richardsoni.** Richardson Merlin. Probably occurs occasionally in migration.]

Falco sparverius phalœna. Desert Sparrow Hawk. Summer resident, abundant. By far the most abundant raptorial bird found in the County. Arrives the first of April and breeds during the whole of May and June up to at least 8,500 feet. As soon as the young are able to fly they congregate in small flocks and frequent the fields feeding chiefly on mice and grasshoppers. By November first all have left for the south. The choice of a nesting site varies greatly. I have found them breeding in cedar stumps within four feet of the ground, in cavities in sandstone ledges and one pair nested in the roof of a small schoolhouse.

Pandion haliaetus carolinensis. American Osprey. Irregular migrant. Miss Eggleston says of this bird, "Occasionally seen perched along the high banks of the Rio Colorado watching for fish. It is a solitary bird only one being seen at a time."

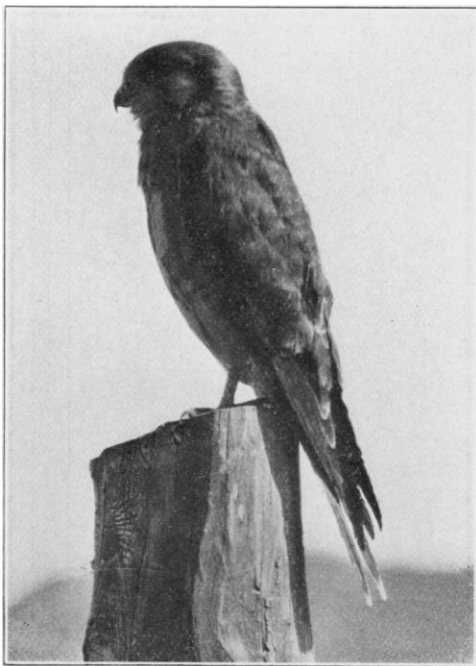
Asio wilsonianus. American Long-eared Owl. Resident, not uncommon. This bird is occasionally met with along the creek bottoms and in dense willow thickets around springs, but on account of its retiring habits is little known. Nests about the middle of April, usually in willow thickets. Feeds largely upon small birds and mammals.

Asio accipitrinus. Short-eared Owl. The only record at hand for this species is of one seen by the writer during the winter of 1904-05 in Plateau Valley, at about 6,500, during a spell of unusually cold weather. It was hunting around the stock-yards, evidently looking for mice. It is probably of very uncommon occurrence.

[**Cryptoglaux acadica.** Saw-whet Owl. Cooke says of this species that it occurs thruout the State below 8000 feet. Probably occurs rarely in Mesa County.]

Bubo virginianus pallescens. Western Horned Owl. Resident, not uncommon. Altho I have not found it nesting there can be no doubt but what this bird breeds in the County as I have seen it all thru the winter and in June 1897 I saw an adult bird and two young of the year. I have no positive information as to whether the Mesa County bird is referable to *arcticus* or to *pallescens* but am led to believe it is the latter.

Speotyto cunicularia hypogæa. Burrowing Owl. Miss Eggleston says this



SPARROW HAWK

bird is a common resident around Grand Junction, "being found frequently sitting at the mouth of an abandoned prairie-dog hole, blinking in the bright sunshine. Some seasons they seem to be much more common than others."

[**Glaucidium gnoma**. Pygmy Owl. Has been reported as common in south-western Colorado, and occurring in Routt County, while Carter found it breeding in Middle Park. There can therefore be little doubt of its being a not uncommon resident in suitable localities in Mesa County.]

Coccyzus americanus occidentalis. California Cuckoo. Miss Eggleston calls it "summer resident" and says "One pair nested for several seasons in an orchard near us. Each evening after sunset the plaintive notes could be heard for a quarter of a mile, but the birds were seldom seen."

Ceryle alcyon. Belted Kingfisher. Summer resident, common. Prof. W. W. Cooke in his *Birds of Colorado* gives this bird as "Resident", and Mr. Sullivan says that a few remain thruout the winter if they can find open water, but the writer has never seen them in the higher portions of the County except in summer. Mr. E. R. Warren reports it from Grand Junction as late as October 6. During the summer months it is common along all the streams up to at least 8500 feet and breeds with more or less regularity. Mr. Sullivan mentions it as breeding near Grand Junction.

Dryobates villosus monticola. Rocky Mountain Hairy Woodpecker. Resident, common in suitable localities. The writer has not collected sufficient information to make any definite statements regarding abundance, distribution, migrations, etc., further than the following from Mr. Sullivan who says it is "rather scarce, summer resident. Have seen it in mild winters, probably northern birds. Do not know that it breeds this low down, but have seen it feeding young."

Dryobates pubescens homorus. Batchelder Woodpecker. Resident, common. More abundant from 7000 up during the breeding season, and winters up to at least 9000 feet. Nests early in June. Mr. Sullivan considers this bird as rather scarce at Grand Junction but has seen it feeding young.

[**Picoides americanus dorsalis**. Alpine Three-toed Woodpecker. Prof. Cooke states that the never common this bird is very generally distributed thruout the higher portions of the State. It therefore probably occurs regularly on Grand Mesa.]

Sphyrapicus varius nuchalis. Red-naped Sapsucker. Summer resident, common. Frequents the quaking-asp groves in the gulches from 8000 to 9000 where the great bulk of the birds breed. I have no information as to its migratory movements relative to Mesa County. One was seen however April 22, 1902, 10 miles south of DeBeque at about 6000 feet which was evidently a migrant. Mr. Sullivan says they are seen only occasionally during the summer at Grand Junction.

Sphyrapicus thyroideus. Williamson Sapsucker. Quoting Miss Eggleston: "Regular migrant, being found quite frequently thru the orchards in the early spring. They are generally credited with killing the fruit trees, but examination reveals the fact that the trees frequented by the birds are killed by borers!" This species is undoubtedly a summer resident and breeder in suitable localities in the higher portions of the County but the writer has never had the good fortune to encounter it within the County boundaries.

Asyndesmus lewisi. Lewis Woodpecker. Summer resident, common. Frequently met with along the streams in the lower portions of the County. I have seldom seen it above 6500. Mr. E. R. Warren reports it from Grand Junction September 28. Nests along the creek or river bottoms, preferring large naked stumps. More common along the Grand River than higher up in the hills. I have never seen it in winter.

Calaptes cafer collaris. Red-shafted Flicker. Resident, abundant. One of

the most common birds found in the County. Found at all altitudes during the summer and breeding abundantly wherever found. Its choice of a nesting place is varied. I have found it in cottonwoods, cedars, scrub-oak, pine and aspen. Winters along the streams in the lower part of the County, but not so plentiful in winter as in summer. Its breeding habits are rather uncertain; fresh eggs may be found during all of May and June.

Phalænoptilus nuttalli. Poorwill. Summer resident, presumably common. Owing to its retiring habits and nocturnal proclivities I have very little information regarding this peculiar bird. One was collected for identification July 5, 1899, at about 6500 feet in the Plateau Valley, and I have seen several others up to 8000 feet, but have not found it nesting, altho it undoubtedly does breed in the County.

Chordeiles virginianus henryi. Western Nighthawk. Summer resident, common. A bird of the lower altitudes, much more common below 6500 feet than above, in fact it is rarely met with above 8000. Arrives rather late in the spring, seldom occurring in any abundance before May 1. Nests late in June, selecting dry rocky ridges or sage brush flats as a nesting site. Departs for the south with the first frosts. Mr. Sullivan's extreme dates of arrival and departure are May 8 and October 18. He says they are most abundant during the middle of August gradually diminishing after that date.

[**Cypseloides niger borealis.** Black Swift. Occurs regularly in Southwestern Colorado and probably wanders into Mesa County from the south.]

Aeronautes melanoleucus. White-throated Swift. Summer resident, of uncertain occurrence. The writer has occasionally seen large flocks of these birds, flying at a great height, pass over the Plateau Valley during the summer months, but their occurrence is very uncertain, and I do not think they breed in the eastern part of the County. My earliest arrival date is April 27, 1902. Mr. Sullivan says a large colony breeds in the "ragged faces of the cliffs near the Book Cliffs Coal Mine". Prof. Cooke states that they nest commonly at Whitewater.

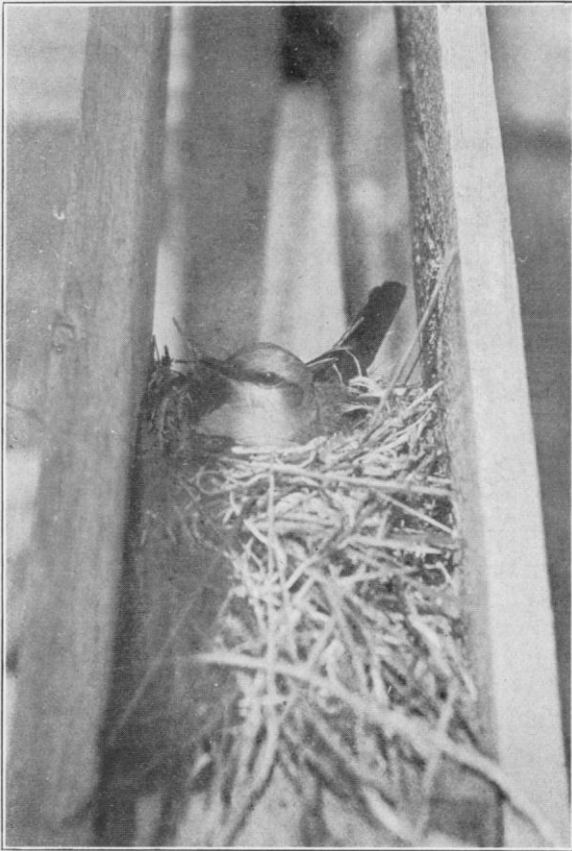
Trochilus platycercus. Broad-tailed Hummingbird. Summer resident, abundant. The only hummer I have found in the County, altho *T. alexandri* and *S. rufus* undoubtedly occur with greater or less regularity. Arrives early in May (May 4, 1902, is my earliest arrival date), and breeds during June and July. Frequents the timber along the streams from 6000 feet up and raises two broods in a season and possibly three. I found them breeding abundantly on Buzzard Creek at about 8000 and found nests containing fresh eggs, freshly hatched young and fledglings just ready to leave the nest on the same day and within a radius of half a mile. The nests are placed in pines, cottonwoods, and alders from 6 to 30 feet from the ground and almost invariably near or over running water. One nest found was built on a root protruding from a bank directly over and within 2 feet of the swift running water of Buzzard Creek. I have noted it as late as October 15 but I think the bulk migrate in September.

Selasphorus rufus. Rufous Hummingbird. Quoting Miss Eggleston, "Irregular migrant. This hummer is not often seen, but occasionally will be met with for a few days when the early flowers are out."

[**Tyrannus tyrannus.** Kingbird. It is hard to understand why this well known bird has not been reported by some of the observers who have furnished the basis of this list, but tho special inquiry about this species has been made the writer has been unable to find any record of its occurrence in the County. It breeds in Middle Park, is known to occur rarely in Routt County and probably occurs occasionally in the Grand Valley.]

Tyrannus verticalis. Arkansas Kingbird. Summer resident. I am not positive as to the relative abundance of this species and *T. vociferans*. Prof. Cooke in his *Birds of Colorado* says of *verticalis*, "Scarcely found in the mountains, rising

regularly only to 7000 feet. Breeding from there down to the plains." This would still leave a large part of the County within their breeding range. I am led to believe that both forms breed commonly as I have found Kingbirds nesting abundantly from 4800 to 8500, but have not felt justified in collecting a large enough series to determine definitely their relative abundance or range. Miss Eggleston writes: "Both *verticalis* and *vociferans* breed freely near Grand Junction tho *verticalis* is more abundant." Mr. Sullivan says, "Both kinds are very plentiful and extremely noisy generally about August 1. After that date they thin out very rapidly. Extreme dates of observation are April 11 and August 11.



ADULT ARKANSAS KINGBIRD ON NEST BUILT BETWEEN
DIAGONAL BRACES OF LARGE FARM GATE

Tyrannus vociferans. Cassin Kingbird. Summer resident, common. This species together with the preceding are among the most common breeders found in the County, and the dates of arrival, nesting, food habits, etc., of the two species are practically identical. Arrives the first of May and breeds from May 15 to July 1, according to altitude, selecting various nesting sites. I have found nests in scrub-oak, cottonwoods, quaking-asps, and gate frames, on log fences, and on the top rail of a large farm gate. The birds are of a sociable disposition, nests being rarely found any great distance from human habitation. Prof. Cooke states that both species breed up to 8000 feet; I have found a Kingbird breeding commonly at 8000 feet and as *vociferans* is more typically a mountain bird I have attributed these records to this species.

Myiarchus cinerascens. Ash-throated Flycatcher. Writing of this western species Mr. Sullivan says: "Summer resi-

dent. Not common; rather scarce. Frequenter of thickets, brush and low woods. Have never been able to find their nests; am certain they breed, for I have seen their young in the brush, and the adults feeding them." Extreme dates he gives as May 2 and August 22. I have no other information regarding this species.

Sayornis saya. Say Pewee. Summer resident, abundant. A characteristic bird of the County. Every ranch has its pair (or possibly more) of Phoebe during the entire summer nesting in the barns, under sheds or in outbuildings. In the lower parts of the County it is an early arrival. Mr. Sullivan reports it from Grand

Junction as early as March 4 and nests as early as the last week in April, with young on the wing by June 1. In the higher parts of the County, however, the dates of arrival and nesting are considerably later. My earliest arrival date is March 21 and the earliest nest May 4, while the great bulk of the nests are two weeks later. Raises two broods in a season and the bulk depart in September, altho E. R. Warren has seen it at Grand Junction as late as October 4.

Nuttallornis borealis. Olive-sided Flycatcher. Information is lacking regarding the occurrence of this species within the confines of the County. It is included in this list on the strength of a single specimen seen during the summer of 1905 at 6800 in Plateau Valley. I do not think it is common anywhere in the County.

Contopus richardsoni. Western Wood Pewee. Summer resident. Common. One of the most common Flycatchers in the higher parts of the County. Frequents the quaking-aspen particularly from 7000 to 10,000 feet where its plaintive calls may be heard continually during the breeding season which is late in June. The writer has not seen it in any abundance below 7000 feet.

[**Empidonax difficilis.** Western Flycatcher. The absence of this bird from the list can only be accounted for by the lack of systematic collecting by field workers, as it is a common summer resident thruout the mountains of the State and undoubtedly occurs more or less commonly in Mesa County.]

Empidonax trailli. Traill Flycatcher. Prof. Cooke says, "One collected in June, 1893, at Grand Junction by J. A. Loring. The species was not rare and was breeding."

[**Empidonax hammondi.** Hammond Flycatcher. Whatever has been said regarding the Western Flycatcher will apply equally well to this species.]

Empidonax wrightii. Wright Flycatcher. Summer resident, common. Frequents the open hillsides covered with "buck brush" from 7000 to 9000 feet, where it nests commonly late in June. I have no information concerning its migratory habits.

Otocoris alpestris leucolæma. Desert Horned Lark. Summer resident, not common. Winter resident, abundant. Arrives in small scattered flocks with the first cold weather and in large numbers with the first snow. It remains abundant up to about April first when the birds begin to scatter and migrate and by the middle of April is seldom seen. I am of the opinion that most of the birds wintering here breed farther north and what few birds breed in the County come in from the south. Miss Eggleston reports it as "abundant both summer and winter" at



NEST OF THE SAY PHOEBE; MESA COUNTY

Grand Junction, but Mr. Sullivan writes that he has not seen it at the same point during the summer. Prof. Cooke states that they are "not rare at Grand Junction in summer." The writer has seen it only once during the summer and this was a lone specimen observed July 8, 1899, at 6500 feet in Plateau Valley.

***Pica pica hudsonica*.** American Magpie. Resident, abundant. Probably the most generally distributed bird occurring in the County. Is common everywhere and at all altitudes. Nests in April and May according to altitude and breeds abundantly from 4800 to 10000 feet. My earliest date for eggs is March 31 at 6500 feet. It is a source of great annoyance to the farmers and cattle men attacking open sores on the cattle, sometimes with serious results, and stealing large numbers of young chickens and eggs. It nests in all sorts of locations including cottonwoods, cedars, pinyons, willows, service-berry, box-elder and alder and at heights ranging from 6 to 60 feet, above ground. The birds are most common in the settled country during the winter but I have found them as high as 8000 feet in January and miles from a ranch, when the upper country was under three feet of snow. During the winter they live largely on dead animals, but it is during the spring and summer that their depredations are most conspicuous.

***Cyanocitta stelleri diademata*.** Long-crested Jay. Resident, common. Much more in evidence during the winter than summer, but I am inclined to think this is due to their seclusive habits during the breeding season rather than to a diminution of their numbers. Breeds during June in the spruce everywhere above 8500 feet and winters commonly up to at least 6500 feet. They do not leave their winter quarters for the spruce until late in April returning to the valleys late in October.

***Aphelocoma woodhousei*.** Woodhouse Jay. Resident, common. A bird frequenting lower altitudes than the preceding during the summer, but found everywhere in company with *C. s. diademata* during the winter. Frequents the open scrub-oak hillsides from 5500 to 7500 feet during the breeding season where it nests commonly during June, and evidently winters near the breeding grounds, altho it may perform a slight vertical migration. It is the commonest of the larger birds with the exception of the magpie around the ranches in winter feeding on grain in the barnyards and stables and becomes very tame.

***Perisoreus canadensis capitalis*.** Rocky Mountain Jay. Resident, common in suitable localities. Wherever an altitude of 10,000 feet or over is attained these birds are common both during winter and summer, but they are seldom seen below 9500 feet even in winter and are consequently rather inconspicuous. No information is at hand concerning their breeding habits in this County.

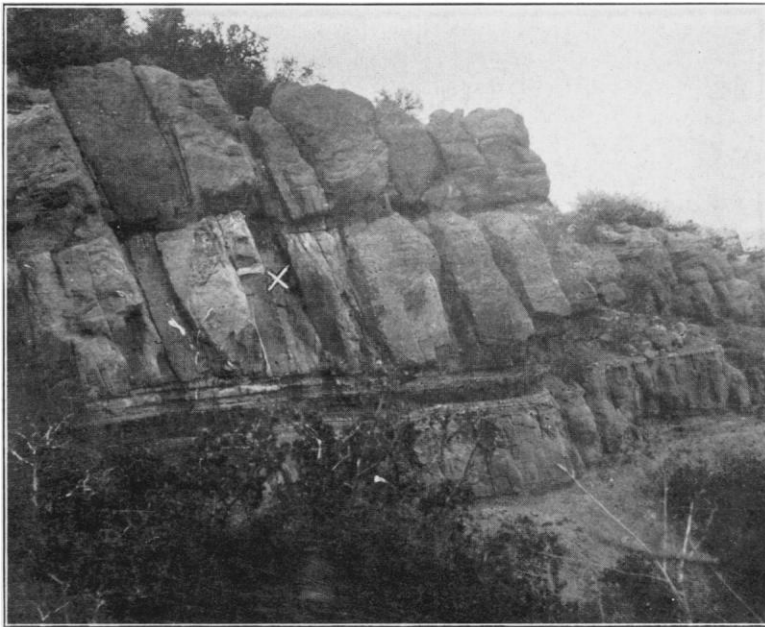
***Corvus corax sinuatus*.** American Raven. Resident, common. I am led to believe that Ravens perform practically no migration. They are equally plentiful in summer and winter and I have never noticed any migratory signs. They breed commonly during April from 5000 to 7000 feet, frequenting rocky unsettled localities and nesting in high sandstone cliffs. They are particularly numerous in all the box canyons emptying into the Grand Canyon. Mr. W. P. Ela states that they formerly nested commonly on the Little Dolores River but he has not known of their nesting there of late years. They are commonly found with the Turkey Vulture around carcasses and the two are evidently on the best of terms. A bird of solitary habits but occasionally seen in small flocks.

***Nucifraga columbiana*.** Clarke Nutcracker. My notes on this singular bird are very incomplete. I have seen them in March at 5000 feet and in June at 7000 feet in small flocks. Judging from these dates it is not improbable that they breed in the County and records from surrounding localities seem to support the sup-

position. They are probably winter as well as summer residents tho information of a definite nature to verify this is lacking.

Cyanocephalus cyanocephalus. Pinyon Jay. Resident, abundant. Frequents the barren cedar country from 5000 to 8000 feet in immense flocks during late summer, fall and winter and divides into small flocks to breed, late in March and in April. I have found young just able to fly as early as April 22. They are occasionally seen during summer and fall in the cultivated valleys but the great bulk of the birds are found among the dry cedar covered hills far removed from habitations, and are very seldom seen in well watered localities. Miss Eggleston says it is abundant around Grand Junction during the fall.

[**Dolichonyx oryzivorus.** Bobolink. This species probably occurs rarely within the County boundaries. Carter took it in Middle Park and South Park and Mr. E. R. Warren saw several in Routt County during the summer of 1907.]



NESTING SITE OF AMERICAN RAVEN (just above cross) ON SANDSTONE LEDGE; MESA COUNTY, 6800 FEET ALTITUDE

Molothrus ater. Cowbird. Summer resident, common. Thruout the cultivated portions of the County the Cowbird is common, but in the barren or sparsely settled parts it is rarely met with. Frequents pastures and feed-lots used by cattle and is at all times very tame and lifeless. Nests of the Yellow Warbler, Green-tailed and Spurred Towhees and Red-winged Blackbird are the favorite repositories for the eggs, which are deposited during June.

Xanthocephalus xanthocephalus. Yellow-headed Blackbird. Summer resident, not uncommon. Miss Eggleston says, "These birds are seen in small numbers with the flocks of other Blackbirds and Cowbirds. They are numerous in the cattail swamps and scarcely notice passers by." Mr. Sullivan mentions a colony of 15 or 20 birds nesting in a slough near Grand Junction. In the higher portions of the County they are rarely seen and I have not found them nesting in Plateau Valley.

Agelaius phoeniceus. Red-winged Blackbird. Summer resident, abundant. One of the most abundant summer birds, arriving early in March, nesting in June up to at least 7000 feet and remaining until late in October. My earliest date at 6500 feet is February 20. Mr. Sullivan states that he saw flocks of these birds occasionally during the winters of 1903-4 and 1904-5 at Grand Junction.

Sturnella neglecta. Western Meadowlark. Summer resident, abundant. One of the earliest arrivals in spring, appearing about March 15 and by the first of April is abundant. Breeds thruout its range up to at least 7500 feet during May, June and July and raises two broods in the lower altitudes. Essentially a bird of the farming regions and seldom seen in unsettled localities. The great bulk leave the County in October but Mr. Sullivan saw the bird occasionally during the winters of 1903-4 and 1904-5 and says a few remain thruout nearly every winter.

Icterus bullocki. Bullock Oriole. Summer resident, abundant. Altho a late arrival in the spring, being seldom seen before May 10, this oriole is one of the commonest as well as widely distributed breeders within the County. It is particularly abundant among the large cottonwoods along the Grand River. In the Plateau Valley I have found it nesting in scrub-oaks within 15 feet of the ground. Frequents thickly settled portions and nearly every ranch house if surrounded by trees has its pair of orioles. Departs for the south in August. Mr. Sullivan's extreme dates of arrival and departure are May 5 and August 8.

Euphagus cyanocephalus. Brewer Blackbird. Summer resident, abundant. Fully as abundant and as widely distributed as the preceding species. Arrives late in March or early in April (my earliest date is March 31) and breeds about the middle of May. Large numbers of nests are destroyed by irrigation and as the birds are very persistent, the breeding season continues well into August. A favorite nesting site is a ditch bank in an alfalfa field, and wild rose thickets are often taken possession of by small colonies of from 20 to 50 pairs. When the young are able to fly the birds congregate in vast flocks which frequent the newly cut hay and grain fields feeding almost entirely upon insects. Departs for the south in October. Mr. Sullivan states that a few remain each winter around Grand Junction.

Hesperiphona vespertina montana. Western Evening Grosbeak. Winter resident, not uncommon. Information regarding this species is limited. They have been observed in February and April; and one flock August 3, 1899, at 6500 feet in Plateau Valley; but I am inclined to think the latter were stragglers from a higher altitude. Probably occurs regularly during the winter but never in any great abundance.

Pinicola enucleator montana. Rocky Mountain Pine Grosbeak. Resident, not common. This species is listed as above on the strength of two records. One taken on South Mamm Peak at about 10,000 feet July 3, 1898, and a pair seen April 4, 1902, in Plateau Valley at 6500 feet. They may possibly be of common occurrence in the few points of high altitude in the County.

Carpodacus cassinii. Cassin Purple Finch. Resident, not common. This bird is a regular winter visitant up to at least 7000 feet often found in company with the Western Evening Grosbeak. I have not seen it in summer, but as Carter found it breeding commonly at Breckenridge not over 100 miles east, it will undoubtedly be found nesting in the higher portions of Mesa County.

Carpodacus mexicanus frontalis. House Finch. Resident, common in the lower altitudes. Probably one of the most numerous birds in the towns along the Grand River, but of rather uncommon occurrence above 6500 feet, where it is oc-

casionally seen during the early fall. Breeds thruout May and June, and performs a very slight, if any, vertical migration.

[***Loxia curvirostra stricklandi***. Mexican Crossbill. Carter found this bird breeding at Breckenridge and judging from its established range it is not unreasonable to expect to find it a regular resident, tho at all times rare.]

Leucosticte australis. Brown-capped Leucosticte. Winter resident. There does not appear to be any locality of sufficient altitude within the County boundaries to attract these birds during the summer. My only record is that of a large flock observed March 12, 1902, five miles southeast of DeBeque at about 5500 feet.

[***Acanthis linaria***. Redpoll. Another common bird whose absence from this list is hard to explain. Undoubtedly occurs regularly in winter and probably in some abundance at times.]

Astragalinus tristis pallidus. Western Goldfinch. Prof. Cooke says a few were seen November 11, 1895, by A. H. Howell at Grand Junction. There is no further information at hand regarding this bird.

Astragalinus psaltria. Arkansas Goldfinch. Summer resident, not uncommon. A late arrival and a late breeder, fresh eggs usually being found in July. More common in the lower portions of the County than higher up. Prof. W. W. Cooke mentions this form as breeding at Glenwood Springs, as it undoubtedly does in more or less abundance all along the Grand River from that point on down to the Utah line.

Spinus pinus. Pine Siskin. Resident, common. One of the commonest winter birds up to at least 7000 feet feeding in large flocks and frequenting the cultivated sections. Early in April the flocks break up and the birds retire to the higher mountains to breed. During the summer months they are very seldom met with. Mr. E. R. Warren reports a flock from Grand Junction, October 3.

Passer domesticus. English Sparrow. Resident, common. "Miss Myra Eggleston reports that they reached Grand Junction during the fall of 1899, a flock of a dozen being seen. This is the first record for Colorado west of the range, and there is nothing to indicate whether these birds reached Grand Junction from eastern Colorado or have come eastward from Utah. The distance is less from where they occur in Utah, and the mountain passes much lower." (Cooke's *Birds of Colorado*, 2nd App.) They first arrived in Plateau Valley during the fall of 1904 and in June, 1905, a nest with incubated eggs was destroyed. Since that time they have steadily increased in numbers.

Poœcetes gramineus confinis. Western Vesper Sparrow. Summer resident,



NEST OF THE WESTERN SAVANNA SPARROW IN DENSE
HAY FIELD; MESA COUNTY

abundant. Probably the most abundant breeding sparrow in the County. Arrives from the south the middle of April and breeds during May, June and July, raising two broods. Frequents cultivated sections and breeds abundantly in young grain and alfalfa fields up to at least 8000 feet. During late summer they are found in great numbers in the freshly cut hay and grain fields. Leaves for the south in October.

***Passerculus sandwichensis alaudinus*.** Western Savanna Sparrow. Summer resident, common. Arrives about the middle of April and breeds during May, June and July to at least 8000 feet, and raises two broods. Its favorite nesting site is in the alfalfa fields, where it conceals its nests in the dense alfalfa plants close to or upon the ground. In company with the Western Vesper Sparrow, Western Lark Sparrow and Western Chipping Sparrow it is abundant in the hay fields in late summer.

***Chondestes grammacus strigatus*.** Western Lark Sparrow. Summer resident, common. Not as frequently met with as the two preceding species, but by no means of uncommon occurrence. Their general habits do not differ greatly from the preceding. Mr. Sullivan's extreme dates of arrival and departure are April 1 and September 22.

***Zonotrichia leucophrys*.** White-crowned Sparrow. I have occasionally observed this bird in migration but have no information relative to its resident abundance. Judging from the fact that Carter found it breeding abundantly at Breckenridge I am inclined to think it is a regular summer resident in the higher portions of the County. Mr. E. R. Warren took one at Grand Junction October 2, 1905, and Mr. Sullivan considers it a common migrant there.

***Zonotrichia leucophrys gambeli*.** Intermediate Sparrow. Mr. Sullivan in speaking of this species at Grand Junction writes, "Common migrant. The most numerous of all the migrating sparrows. I have seen them here all winter (1903-4). Usually they disappear altogether. They are usually in the country from the south by April 1 to 15 and return October 1 to December 15.

***Spizella monticola ochracea*.** Western Tree Sparrow. Winter resident, abundant. The only sparrow occurring in any abundance during the winter months. Arrives in October and November and frequents wooded or cultivated sections up to at least 7500 feet. By April 1 nearly all have departed for their northern breeding grounds.

***Spizella socialis arizonæ*.** Western Chipping Sparrow. Summer resident, common. Arrives about the middle of April (my earliest date is April 2, 1902), and breeds up to at least 8000 feet, during May and June. It is more common below 6500 feet than above and frequents cultivated regions. It is particularly abundant during August and September in the hay fields. Mr. E. R. Warren has seen it at Grand Junction as late as October 3.

***Junco montanus*.** Montana Junco. Prof. Cooke says, "Several were seen and one collected, in late September, 1906, by Merritt Cary a few miles north of the northern line of the County. A day or two later he saw a flock of birds, inside the county limits that were undoubtedly the same species."

***Junco aikenii*.** White-winged Junco. ***Junco hyemalis connectens*.** Coues Junco. ***Junco mearnsi*.** Pink-sided Junco. Winter residents, abundant. All three of these Juncos occur abundantly thruout the winter, but I have very little definite information as to their relative abundance. Mr. Sullivan says that *connectens* is the commonest form found at Grand Junction. The bulk of the northward migration occurs about April 1.

***Junco caniceps*.** Gray-headed Junco. Summer resident. During the summer

months this is such an inconspicuous bird that I am unable to state in what abundance they occur. I have found them breeding at Alexander Lakes just outside the County and they are undoubtedly not uncommon breeders thruout the County in the higher altitudes.

Amphispiza nevadensis. Sage Sparrow. Summer resident, common. Miss Eggleston says this bird is found quite abundantly in the sage-brush covered mesas, nesting in the tufts of bunch-grass. Prof. Cooke states that it is quite common on the sage brush plains of western and southwestern Colorado. I am inclined to think that it is much more common in the lower parts of the County than in those portions above 7500 feet.

Melospiza melodia montana. Mountain Song Sparrow. Summer resident, common. Next to *P. g. confinis* this is the commonest sparrow during the summer. Arrives as early as March 15 and is abundant by April 1. Breeds late in May up to at least 7000. Its favorite breeding ground is in boggy "draws" in cultivated fields, where it builds either at the base of a stunted willow or in a thick tuft of alfalfa. Mr. Sullivan says the bird is an occasional winter resident around Grand Junction.

Melospiza lincolni. Lincoln Sparrow. Prof. Cooke writes, "One found dead during the fall of 1895 by A. H. Howell at Grand Junction." There is no further information at hand regarding its occurrence in the County.

[**Passerella iliaca schistacea.** Slate-colored Sparrow. Specimens of this species have been taken at Glenwood Springs, at the mouth of the Blue River in Middle Park, and in La Plata County, so it is not unreasonable to expect that it may be found in Mesa County, tho probably of rare occurrence.]

Pipilo maculatus arcticus. Arctic Towhee. Prof. Cooke in his *Birds of Colorado* states that *arcticus* comes west only to the eastern base of the Rocky Mountains but the writer has towhee notes on February 18 and 21, and March 16, 17, 20 and 26 which he has attributed to this form owing to the accepted belief that *montanus* is strictly a summer resident. Mr. Sullivan also writes that he has observed towhees between December 22 and March 1. Miss Eggleston considers them rare at Grand Junction. Prof. Cooke in discussing this point says, "I have no record of the occurrence of *arcticus* in western Colorado, but it must be the form there for it breeds in Montana and is known as a common fall migrant in Utah and a common winter resident of southern Utah and southern Nevada. You are probably right but I wish you had a specimen to back it up."

Pipilo maculatus montanus. Mountain Towhee. Summer resident, abundant. Occurs abundantly thruout the County up to 10,000 feet during the entire summer and breeds abundantly thruout the upper half of its range. The great bulk arrive late in April and breed the middle of May. Frequents the open scrub-oak hillsides in well watered localities. Seldom met with in arid sections.

Oreospiza chlorura. Green-tailed Towhee. Summer resident, abundant. Above 6000 feet this species is fully as abundant as the preceding but owing to its inconspicuous habits is not so often noted. Arrives late in April and ascends at once to the higher portions of the County and by the middle of May is abundant up to 9000 feet. Breeds about June 15 and frequents open hillsides covered with low service-berry bushes which seem to be a favorite receptacle for the nests.

Zamelodia melanocephala. Black-headed Grosbeak. Summer resident, common. A common bird up to at least 7500 feet, frequenting the dense growth along streams, and nesting thruout its range. Arrives in May and breeds early in June. Departs south in September. Mr. Sullivan's extremes of arrival and departure at Grand Junction are April 20 and October 2.

Cyanospiza amœna. Lazuli Bunting. Summer resident, common. A char-

acteristic species up to at least 7000 feet, but much more common between 5000 and 6000 feet. Frequents open scrub-oak country in well watered localities and breeds late in June and in July, usually selecting a scrub-oak in dense growth as a nesting site.

Piranga ludoviciana. Louisiana Tanager. Summer resident, not uncommon. Typically a bird of the higher altitudes, where it frequents the heavy spruce timber during the breeding season. Occasionally seen as low as 6500 feet, in pinyon timber during June and July but not by any means common. Much more in evidence in the lower portions of the County during the fall migration, when they are quite common. During the return movement in spring they are not so conspicuous.

Piranga erythromelas. Scarlet Tanager. Mr. Sullivan writes, "Only one seen; date June 4, 1904. The red and black markings were too plain to admit of



NEST AND EGGS OF GREEN-TAILED TOWHEE IN SERVICE-BERRY BUSH

doubt. I hardly think they breed." This record while an exceedingly strange one is well supported by Prof. Cooke's record of 2 birds taken at New Castle during the spring of 1892, which is only about 70 miles up the river from Grand Junction.

Progne subis. Purple Martin. Summer resident, occurrence doubtful. Prof. Cooke says, "As common in Utah as in the east and not uncommon in the extreme western part of Colorado." And again, Miss Myra Eggleston writes that the Purple Martins are common at Grand Junction, but do not breed in town, preferring the banks of the river not far distant." Mr. Sullivan takes issue with this latter statement and says that extensive inquiry among the older residents of Grand Junction failed to reveal a single one who had ever seen this bird there, and that in his own observations covering about three years he had only seen it once. He closes a lengthy and interesting discussion of the subject by saying, "Therefore on

the whole proposition of Martins in Mesa County I can positively say that they are only accidental here (Grand Junction), and have not bred here for over twenty years." I have occasionally seen them during June and July at a big beaver meadow at the head of Beaver Creek at about 9000 feet and am satisfied that they breed there.

Petrochelidon lunifrons. Cliff Swallow. Summer resident, abundant. Probably occurs in greater numbers within the County boundaries than any other bird. Breeds in immense colonies from the lowest parts of the County up to at least 9000 feet. There are several large colonies to be seen from the car windows in Grand Canyon just below DeBeque. Large flocks often take possession of barns and other out-buildings tho most of the birds resort to the sandstone ledges to breed. Arrives about May 1 and is rather irregular about nesting, but the bulk breed late in June. They are persistent birds and will rebuild repeatedly if the nests are destroyed. Departs south early in September. Mr. Sullivan's extreme dates of arrival and departure are April 29 and September 17.

Hirundo erythrogaster. Barn Swallow. Summer resident, common. Nearly every ranch in the County has a few pairs of Barn Swallows nesting in the barns and outbuildings during the summer, and while they occur fully as regularly thruout the County as *P. lunifrons* they are no where found in such large numbers. Arrives about May 1 and begins nest building at once; but the eggs are rarely laid before June 1, and two and sometimes three broods are raised in a season. Mr. Sullivan's extreme dates of arrival and departure are April 27 and September 3.

Iridoprocne bicolor. Tree Swallow. Mr. Sullivan writes regarding this species, "A few noted here in company with the succeeding (Violet-green Swallow). The time of arrival and departure corresponds to the Violet-green Swallow. I do not know that they breed; probably do in favored localities." This is the only definite information at hand altho the writer has often seen a bird in Plateau Valley that he took to belong to this species.

Tachycineta thalassina. Violet-green Swallow. Summer resident, abundant. While it is more abundant in the higher portions of the County, it is common everywhere, nesting principally above 6000 feet during June and July. The writer has found it breeding both in hollow trees and in cavities in sand banks. Arrives about May 1 (my earliest date is April 22 at DeBeque) and departs for the south in September. Mr. Warren has seen it at Grand Junction as late as September 30.

Riparia riparia. Bank Swallow. Mr. Sullivan says of it, "Reasonably plentiful and breeds. Six young nearly ready to fly were dug out of a bank on the Gunnison River on July 2, 1904. Extreme dates are May 1 and September 1." I have been unable to secure any further information on this species' occurrence in Mesa County.

Ampelis garrulus. Bohemian Waxwing. Winter resident, rather common locally. In Plateau Valley this bird is a regular winter resident from 6000 to 7000 feet, feeding in large flocks and frequenting well timbered creek bottoms. They arrive with the first severe weather and leave for their breeding grounds early in April. Miss Eggleston reports them as rare migrants at Grand Junction.

Lanius borealis. Northern Shrike. Winter resident, not common. Occasionally seen in all parts of the County during the winter months. A bird of solitary habits, never seen except singly or in pairs, and does not occur in large numbers at any time. Its stay in Colorado is largely governed by climatic conditions, arriving and leaving with severe weather.

Lanius ludovicianus excubitorides. White-rumped Shrike. Miss Eggleston

classes this bird as resident and says, "While not as common as the Northern Shrike it is found in limited numbers near Grand Junction. In the fall and early spring it has a voice not unlike the mockingbird tho not so varied. Grasshoppers and occasionally even mice are seen hanging from the barbs of the wire fences, impaled by the shrikes. The bird seems to like human companions and nests in the chico near some dwelling." Mr. Sullivan also classes it as resident but never very plentiful, and says it breeds near Grand Junction. Mr. E. R. Warren writes, "One or two seen September 26, and on October 4 several more seen between Grand Junction and Palisades. The writer has seen the bird occasionally in Plateau Valley during the summer, but never in the winter.

Vireo gilvus swainsoni. Western Warbling Vireo. Summer resident, common. A rather late arrival in the spring, and goes at once into the well timbered country, where it breeds late in June, mostly about 7500 feet, frequenting creek bottoms and nesting in cottonwoods. A very inconspicuous bird and probably a larger part of its occurrence is overlooked by observers in the field owing to its seclusive habits.

[**Vireo solitarius plumbeus.** Plumbeous Vireo. A common summer resident thruout the mountains of the State. Should thus be found in more or less abundance thruout eastern Mesa County.]

Helminthophila virginiaë. Virginia Warbler. Regarding this bird Miss Eggleston writes, "Regular migrant, possibly occasionally breeding. These birds are so quick in their movements, that they are hard to watch. They come when the early trees leaf out and are quite common until the heat of summer drives them to higher altitudes." Prof. Cooke states that "in western Colorado it is abundant in migration and in many places is the most common warbler during the breeding season." Thus it is probably more or less abundant during the summer thruout the higher portions of the County.

[**Helminthophila celata lutescens.** Lutescent Warbler. A not uncommon summer resident thruout western Colorado. Undoubtedly occurs in more or less abundance thruout the mountains of Mesa County, altho there are no definite records of its occurrence up to date.]

Dendroica æstiva. Yellow Warbler. Summer resident, abundant. By far the commonest breeding warbler thruout the County up to at least 7000 feet. Arrives the first of May and breeds in June. Nests of this bird seem to be the favorite receptacle for eggs of the Cowbird. Much more common below 6500 feet than above. Probably the Grand River bottom is the center of abundance of the species in the County. Departs south early in September. Mr. Sullivan's extreme dates of arrival and departure are April 28 and September 7.

Dendroica auduboni. Audubon Warbler. Summer resident, common; in migration abundant. Strictly a bird of the higher altitudes during the breeding season, when it frequents heavy coniferous timber from 8000 to 10,000 feet. During the fall migration especially it is very plentiful thruout the lower part of the County. Arrives early in May (May 7 is my earliest date), breeds thruout June and July and the southward migration begins late in August, altho Mr. Warren has seen it at Grand Junction as late as September 27.

Dendroica nigrescens. Black-throated Gray Warbler. The only information at hand regarding this species comes from Mr. Sullivan who says, "A single one seen in front of my house May 12, 1904." This species should occur as commonly in Mesa County as in any county in the State, but is never plentiful anywhere within the State.

[**Dendroica townsendi.** Townsend Warbler. Cooke says, "A western species coming east to the base of the foothills. Rather rare in summer, breeding from 5500 to 8000 feet in western Colorado.]

***Geothlypis tolmiei*.** Tolmie Warbler. Miss Eggleston writes regarding this species: "Migrant. For a few days in the first warm weather these warblers are heard and seen in the trees bordering the road-ways. They do not remain long however." Prof. Cooke states that this is one of the commonest warblers of western Colorado, so should be found more or less abundantly as a breeder thruout the higher portions of Mesa County.

***Geothlypis trichas occidentalis*.** Western Yellowthroat. Miss Eggleston says of this warbler, "Summer resident, arriving early in May. These birds stay thruout the summer near Grand Junction." The writer has never seen the bird in Plateau Valley.

***Icteria virens longicauda*.** Long-tailed Chat. Summer resident, not uncommon in the lower part of the County. The only place I have seen this bird is along the Grand River bottom, where it is a regular summer resident and undoubtedly breeds. It was not recorded in Plateau Valley at 6000 to 6500 feet during seven years' observation and its occurrence is probably rare any distance above the Grand River. Mr. Sullivan has found them breeding near Grand Junction but says the birds are very scarce. He says, "Toward August the bird becomes almost silent and toward the close of that month it slinks around the bushes, silently diving here and there into the brush and undergrowth that were once its home, making one wonder at the transition from the noisy customer of the early spring."

***Wilsonia pusilla pileolata*.** Pileolated Warbler. Prof. Cooke writes, "Several seen September 20-23, 1906, by Merritt Cary a few miles north of the northern boundary of Mesa County. As these birds were there in fall migration, they would have entered the County a few hours later."

***Anthus pensilvanicus*.** American Pipit. Miss Eggleston writes of this species, "Early in the spring these birds arrive in large flocks. They start from the ground or low bushes and fly upward with a startled cry, remain almost stationary in the air for an instant and then drop quickly back again showing the white of their tail as they alight." It is not probable that the County affords any regions of sufficient altitude for their nesting site as they never breed below timberline.

***Cinclus mexicanus*.** American Dipper. Resident, common locally. The dipper is rather common in all suitable localities from 6000 feet up during the summer and breeds wherever found. During the winter they move somewhat lower, but thruout the severest weather are found as high as 6000 feet. The nesting period extends thruout June and first half of July. Frequents the clear rapid mountain streams.

***Oroscoptes montanus*.** Sage Thrasher. Summer resident, not uncommon. Miss Eggleston writes, "These birds are quite common on the long stretches of un-irrigated land covered only with sage brush." Breeds in the lower part of the State wherever sage-brush or grease-wood is plentiful, but is much more common in migration than as a breeder. During the migration period they are quite common up to at least 6500 feet.

***Mimus polyglottos leucopterus*.** Western Mockingbird. Mr. Sullivan says, they breed but are not very plentiful and are usually wary and hard to approach. He says they depart for the south about September 1. Miss Eggleston writes, "Summer resident. With us near Grand Junction this bird breeds, bringing out two broods each season. Evidently the same pair returns each year, for a nest in a pile of prunings from an orchard was inhabited season after season."

***Galeoscoptes carolinensis*.** Catbird. Summer resident, not common. Occasionally found in suitable localities up to at least 7000 feet and breeds as high as

6500. Not common enough at any time to ascertain migration dates. Mr. Sullivan, speaking of one observed July 3, 1904, classes it as probably accidental."

Salpinctes obsoletus. Rock Wren. Summer resident, common. Wherever suitable breeding grounds are available the Rock Wren is sure to be found. It is equally abundant about sand-stone ledges in the dry winter range country and along the stone fences in cultivated sections. Arrives about May 1, breeds three weeks or a month later and leaves the County early in October. Mr. Warren reports them as common near Grand Junction the first week in October.

Catherpes mexicanus conspersus. Canyon Wren. The only absolute record at hand is one bird taken at Grand Junction by H. G. Smith March 3, 1906, which is now in the collection at the State Capitol; but there is every reason to believe that this species is more common in Mesa County than in any other county in the State. Mr. Sullivan saw a pair of Wrens May 4, 1904, which he attributed to this species. Prof. Cooke reports them as common around DeBeque early in October, 1906, and several seen at Grand Junction in November, 1895.

Thryomanes bewicki leucogaster. Baird Wren. Prof. Cooke says, "Several seen and one collected November 2, 1895, by A. H. Howell at Grand Junction." This is the only Mesa County record at hand.

Troglodytes aedon parkmani. Western House Wren. Summer resident, abundant. A common bird thruout the County, but much more abundant about 6500 feet than below and thruout the quaking-aspen regions is one of the most abundant breeders. Arrives early in May, breeds about the middle of June and as soon as the young are able to fly ascends to 9 or 10,000 feet in search of insect food. During the month of August they are more abundant than any other bird on the Grand Mesa. Depart for their winter home late in September. Their choice of a nesting site varies greatly. Nearly every deserted cabin has its pair of Wrens, nesting in the crevices between the logs. Gate-frames, boxes, old woodpecker holes, natural cavities and deserted mud nests of the Cliff Swallow are favorite sites.

[**Telmatodytes palustris plesius.** Interior Marsh Wren. "Occurs in Routt County where it winters in the hot water swamps" (Cooke). Probably occurs in Mesa County as a rather rare summer resident.]

Certhia familiaris montana. Rocky Mountain Creeper. Regarding this bird Miss Eggleston says, "Occasional visitor. This bird's visits are uncertain as to time or occasion around Grand Junction. Sometimes in midwinter its cry is heard and a little investigation will locate him creeping up the vines on some of the large buildings or working around the cracks in the bark of the fruit trees. It is not shy and can be watched closely after being located."

Sitta carolinensis nelsoni. Rocky Mountain Nuthatch. Resident, not uncommon. Much more in evidence in winter than in summer, when it is rather common in the cedars and pinyons from 6000 to 8000 feet. During the summer when they retire to heavy timber in the higher altitudes, they are very unobtrusive and are rarely seen, but it is reasonable to suppose that they are fairly common breeders. There is one bird at the State Capitol collected by Mr. H. G. Smith at Grand Junction, November 17, 1903. Mr. Sullivan only saw it twice in Grand Junction in three years' observations, one of which was the above mentioned bird.

[**Sitta canadensis.** Red-breasted Nuthatch. Cooke gives this bird as resident in the mountains tho not so common as *nelsoni* or *pygmæa*. It is probably of regular tho uncommon occurrence in eastern Mesa County.]

[**Sitta pygmæa.** Pigmy Nuthatch. An abundant bird thruout the mountain region of the State. It undoubtedly is a rather common resident in Mesa County and has simply been confused with *S. c. nelsoni* by field workers.]

Bæolophus inornatus griseus. Gray Titmouse. Prof. Cooke says that several

were seen and one collected in early November, 1895, by A. H. Howell at Grand Junction. This is the only record at hand for Mesa County.

***Penthestes atricapillus septentrionalis*.** Long-tailed Chickadee. Resident, not uncommon. While this species is often seen during the winter in the lower parts of the County, it is not nearly so common as the following species and is more typically a bird of the lower altitudes than *gambeli*. They probably nest in the higher portions of the County, but the writer has not observed them during the summer.

***Penthestes gambeli*.** Mountain Chickadee. Resident, common. The most abundant chickadee in Mesa County, far outnumbering *P. a. septentrionalis*. During the winter they are common along the well wooded creek bottoms up to at least 7000 feet even during the most severe weather. As is the case with the two preceding species they are not much in evidence during the summer, but are undoubtedly common breeders from 9000 feet up. Mr. Sullivan says they occur from October to April at Grand Junction.

***Psaltriparus plumbeus*.** Lead-colored Bush-tit. Prof. Cooke says, "Several were seen November 13, 1895, by A. H. Howell at Grand Junction." This is the only record at hand for Mesa County; but during the summer of 1898 Mr. Wm. Cross took a set of eggs at Glenwood Springs, within twenty miles of the northern boundary of the County.

***Regulus calendula*.** Ruby-crowned Kinglet. Summer resident, not uncommon. Owing to their quiet and retiring habits it is not improbable that these tiny birds are much more common than general observations might lead one to believe. They are typically birds of the higher altitudes during the breeding season, which is at its height the latter part of June. The writer saw one bird June 15, 1897, at an altitude of only 6500 feet, but this was evidently either a straggler or a late migrant.

[***Regulus satrapa olivaceus*.** Western Golden-crowned Kinglet. Cooke states that this bird occurs thruout the State in migration. There is probably no place in the County of sufficient altitude to attract these birds during the breeding season.]

***Poliophtila caerulea obscura*.** Western Gnatcatcher. There are three Gnatcatchers in the collection at the State Capitol collected by Mr. W. C. Ferrill near Grand Junction, May 17, 1906, which, altho they have not been positively identified, are probably referable to this sub-species. This is the first record for west of the range.

***Myadestes townsendii*.** Townsend Solitaire. Resident, not common. During the winter months they are occasionally seen in the lower parts of the County, but seldom in any numbers. Their migration, which is largely if not wholly a vertical one occurs late in April and by May 15 they have reached the extreme upper edge of their range, where they breed during June and July.

***Hylocichla ustulata swainsoni*.** Olive-backed Thrush. Summer resident. On August 1, 1905, the writer found a deserted nest containing two fresh eggs of this bird at an altitude of about 6500 feet, on Grove Creek in Plateau Valley. I have no further information regarding the occurrence of this species in Mesa County.

***Hylocichla guttata auduboni*.** Audubon Hermit Thrush. Summer resident, common. The only Thrush occurring commonly in the County. Arrives late in May, breeds in June and July and departs for the south in September. July 24, 1901, the writer found a nest containing three incubated eggs of this species on Grove Creek at an elevation of about 6500 feet, but I am inclined to believe the great bulk breed from one to three thousand feet higher than this. Frequents well-timbered creek bottoms but on account of its retiring habits is seldom seen. One of the most delightful songsters among American birds.

Planesticus migratorius propinquus. Western Robin. Summer resident, abundant. One of the first arrivals in the spring, often being seen as early as February 15, and one of the commonest breeders from the lowest parts of the County up to 10,500 feet. My earliest date of arrival is February 8, and by March 15 they are common. Nests wherever there is timber, during May and June, and raises two broods. Performs a slight vertical migration as soon as the young are able to fly and bands together in flocks for the fall migration in October and November. Mr. Sullivan says, "Undoubtedly remain all winter; that is, a few here and there."

[**Sialia mexicana bairdi.** Chestnut-backed Bluebird. A western species that occurs sparingly thruout western Colorado. Probably occurs in Mesa County rather rarely in summer.]



WESTERN ROBIN IN NEST BUILT UNDER STRAW ROOF OF ROUGH POLE
CATTLE SHED; MESA COUNTY

Sialia arctica. Mountain Bluebird. Summer resident, abundant. Thruout the dry cedar and sage-brush country the Mountain Bluebird is very abundant, nesting in natural cavities in the cedars. Mr. Sullivan says they are not at all common around Grand Junction after the spring migration is over. They are very early migrants, arriving about the middle of February and nesting late in April and in May and raising two broods. The bulk nest between 5000 and 6000 feet, but they are not uncommon up to at least 7000. In the cultivated sections they resort to gate-frames, bird boxes, etc., for nesting sites. The fall migration occurs in October. Mr. Sullivan's extreme dates of arrival and departure are February 11 and October 16.

Denver, Colorado.